Planning against failure – It's not all about technology

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Social science that makes a difference
The essence of the HSRC is evidence-based human and social science research that informs effective public policy debate to facilitate improvements in the living standards of South Africans.

- Data producer
- Research areas
- Environment

- Policy analysis & Capacity Enhancement
- Knowledge Systems
- Social Aspects of HIV/AIDS Research Alliance
- Child, Youth, Family and Social Development
- Democracy and Governance
- Education, Science and Skills Development
- Social Aspects of HIV/AIDS and Health
- Service Delivery
- Education Quality Improvement
- Poverty, Employment and Growth
What is failure?

- Loss of data and documents
- Data management problems
- No / limited re-use of data
What is failure?

Lack of awareness → No funding / commitment

- Technology obsolescence
- Lack of sharing culture
- Limited strategy, standards

- Limited capacity
- Limited expertise
- Limited / inappropriate technology

Loss of data and documents
Data management problems
No / limited re-use of data

Social science that makes a difference
Will technology prevent failure?
Will technology prevent failure?

• Be wary of **IT mythology**!
• **70%** of all IT projects fail
• Technology issues cause only **5%** of IT investment failure  

• Other **95%** ?
Organisational custody

Leadership

Sharing culture

Successful organisational implementation

Social science that makes a difference
Development of organisational custody

Leadership

- Develop a business vision & obtain acceptance of real cost and effort
- Create a critical mass among the work force in favor of change
- Manage change
Development of organisational custody

Sharing culture

- Prove it works
- Promote benefits of preserving and sharing data
- Engage with researchers
- Engage with key stakeholders and leaders
- Develop ownership
- Reinforce ownership by incentives and rewards
- Address personal change
- Address barriers to change (core values, beliefs, behaviors, perceptions, power and politics)
- Take account of researcher’s response to change
- Diffuse innovation
Successful organisational implementation

- Sustainable funding
  - Align with strategic objectives
  - Project based to integral part of each project’s budget (contractual obligation)
- Continuous, systematic management
  - People, data, processes (policies & standards), technology
Successful organisational implementation

People

- Put together a core team
- Develop expertise by
  - Learning from others who have already done successful implementations
  - Obtaining exposure to research and trends (national & international)
  - Inter-organisational collaboration
Successful organisational implementation

Processes

- Develop processes based on normal workflow
- Cooperate with core group on development of processes, policies & standards
- Distribute responsibilities
  - Researchers
  - Data managers/Statisticians
  - Data curators
  - Information managers
  - IT
Process flow

Lifecycle of research data

Fieldwork
Questionnaire
Fieldwork manual

Data creation
Survey/measurement
Data entry
Data checking and cleaning

Data analysis
Analysis
Derived data creation: imputing missing data, new variables, weights
Linkage to other data
Keep syntax files

Raw data
Processed data
Ensures final dataset complies with curation standards

Data for secondary analysis
Saves final version of data set and related documentation to central location with minimum metadata

Dissemination
Prepare dissemination formats

Preservation: Ingest, Storage
Archive data with additional metadata and documentation (preservation format)

Curation appraisal

External: Web Portal Dissemination software

IT

Clients, government, research community, NGOs, public

Info man, IT

Data Management, Info man

Data Management, Info man, IT

Prepare dissemination formats

Appraisal Committee

File structure / DMS

IT

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Successful organisational implementation

Data

- Data engineering
  - Consistent coding schemes
  - Use of tested measures
- Data management
  - Guidelines
  - Version control
  - Managing changes to data made by multiple researchers
  - Dedicated responsibility for data management
  - Sampling, weighting
Technology

Processing management

Acquisition

Object preparation / processing

Ingest formats & media
Validation, checking
Metadata enhancements

Downloading
Online exploration
Access to data

Access to metadata & documentation

Dissemination

Link data to publications & project info
Format translation

Technology watch
Monitoring hardware & software
Implement migration procedures
Media monitoring and refreshing

Data curation

Preservation

Access & security
Backup
Disaster recovery
Connectivity

Social science that makes a difference
Appropriate technology

- Determine what is critical

Car in working order (engine, tyres, etc.)  Driver  Gas  Map or directions

1000 km

Social science that makes a difference
• Determine what is critical
Appropriate technology cont..

- Determine what is critical
- Keep it simple
- Work with what you have
- Determine where you can partner with other organisations
Critical factors for success

- Data curation
- Technology
- Organisational custody
- Funding
- People
- Processes
- Data engineering & management

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Success is not guaranteed by technology

Data curation

It is about what the business and people do with the technology that creates benefit, efficiency and competitive advantage
The end
The end

References


